



**University of Colombo, Sri Lanka**

*University of Colombo School of Computing*



**DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY  
(EXTERNAL)**

Academic Year 2024 — 2<sup>nd</sup> Year Examination — Semester 4

**IT4206 — Enterprise Application Development**

*Part 2 - Structured Question Paper*

(2 Hours for both Part 1 and Part 2)

**To be completed by the candidate**

**Index Number**

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**Important Instructions**

- This paper has **two (2) parts, Part 1 and Part 2**.
- The total duration of **both Part 1 and Part 2 is 2 hours**.
- The final mark for the paper will be determined by averaging the scores of Part 1 and Part 2, each of which is graded out of **100**.
- The medium of instructions and questions is English. Students should answer in the medium of English language only.
- This paper (Part 2) has **2 questions** on **5 pages**. Answer **both** questions.
- Write your answers **only on the space provided** on this question paper.
- Do not tear off any part of this question paper. Under no circumstances may this paper (or any part of this paper), used or unused, be removed from the Examination Hall by a candidate.
- Note that questions appear on both sides of the paper. If a page or part of a page is not printed, please inform the supervisor/invigilator immediately.
- Any electronic device capable of storing and retrieving text, including electronic dictionaries, smartwatches, and mobile phones, is not allowed.
- Calculators are **not allowed**.
- *All Rights Reserved*. This question paper can NOT be used without proper permission from the University of Colombo School of Computing.

**To be completed by the examiners**

<b>1</b>	
<b>2</b>	
<b>Total</b>	

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1. (a). Briefly explain the main difference between *Java Standard Edition (JavaSE)* and *Java Enterprise Edition (JavaEE)*.

**[6 marks]**

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- (b). Briefly explain what is meant by *Spaghetti Codes*?

**[6 marks]**

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- (c). List down three (3) types of *Enterprise JavaBeans (EJB)*.

**[6 marks]**

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- (d). Illustrate the process of the client requesting a service from a Java bean, including all the necessary components, using a diagram.

**[18 marks]**

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- (e). Describe how the *Remote Message Invocation (RMI)* in Java is **Safe** and **Secure**.

**[6 marks]**

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- (f). How does using a **WAR (Web Archive)** file help in deploying and managing JavaEE web applications?

**[8 marks]**

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- 2.** (a). Briefly explain the difference between Redirect and Request dispatch.

**[10 marks]**

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- (b). Illustrate the process of Request dispatch using a diagram including the essential components.

**[15 marks]**

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- (c). *“Using of uniform interface make the RESTful applications simple, lightweight and fast.”*  
Explain how it happens.

**[15 marks]**

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- (d). Illustrate the life cycle of Stateless session bean.

**[6 marks]**

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- (e). List two (2) annotations that can be used to decorate a Stateless session bean

**[4 marks]**

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